



# UNITED STATES PATENT AND TRADEMARK OFFICE

KA

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,008	07/09/2001	Yoshiyuki Shino	35.C15536	4382
5514	7590	05/05/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER

1774

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/900,008	SHINO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tamra L. Dicus	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 14-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-16 and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to the RCE filed 02-02-04. The Examiner acknowledges cancellation of claim 17. The 102(b) rejection over Nakajima is withdrawn due to Applicant's amendment.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-16, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,841,134 to Hida et al. in view of USPN 5,254,525 to Nakajima et al., and further in view of USPN 5,786,055 to Sei et al.

3. Hida teaches an IC card. The IC card includes in this order: an IC (4)/adhesive (6)/reinforcing member (5)/oversheet (2b). See Figures 1a-1d and Figures 6 & 7. Reinforcing member (5) (base material) is provided to cover the boundary between the card substrate and the IC module see col. 2, lines 29-45 and col. 3, line 43-col. 4, line 30. Adhesive (6) (barrier) is placed between the IC and reinforcing member (5) (see multiple Figure 1's). See col. 3, line 43-col. 4, line 30. The reinforcing sheet may be a mesh-like sheet is a knitted or woven resinous material such as polyester or polyimide, used to promote adhesion and serve to increase the

Art Unit: 1774

thickness of the card (col. 4, lines 15-20). The reinforcing sheet may be 10-500 micrometers thick. While Hida suggests printing on the backside of the IC card, where the oversheet lies thereon (col. 6, lines 55-57 and col. 11, line 49), Hida does not disclose *per se*, an ink-receiving layer. However, Nakajima teaches an ink receiving layer in a thermal transfer image-recording material for an ID card. The card is layered in the following order: an IC, a support, an adhesive, a cushion, an image-receiving layer with an ink sheet/layer over to form the image (ink receiving), optional peeling layer of silicone resin and ink sheet. See col. 1, lines 35-45, col. 6, lines 1-23, col. 7, lines 1-15, col. 10, lines 15-60, and col. 17, lines 20-65. Hida and Nakajima are analogous art because they involve the same field of technology, namely the electronic card technology. It would have been obvious to one of ordinary skill in the art to include the ink receiving layer of Nakajima to the IC card of Hida because Nakajima employs an ink receiving layer for the purpose of providing an image (col. 5, lines 60-68, col. 6, lines 1-23, col. 7, lines 1-15, col. 10, lines 15-60, and col. 17, lines 20-65 of Nakajima).

4. Hida does not teach a barrier layer between 0.5 to 20 microns of instant claim 16. At col. 15, lines 10-30, a cushion layer of epoxy resin (adhesive) is taught by Nakajima to be between 1 and 50 microns, meeting Applicant's claimed range from 0.5 to 20 microns of instant claim 16. It would have been obvious to one of ordinary skill in the art to include a barrier layer between 0.5 and 20 microns because Nakajima teaches a barrier of the aforesaid thickness range is a conventional barrier thickness to use within the IC card of Hida (col. 15, lines 10-30 of Nakajima). Therefore, because the barrier is within Applicant's range, the prevention of ink from reaching the electronic information storing part is provided for.

Art Unit: 1774

5. That ink is applied with an ink jet head is a process limitation. Such process limitations as “applying ink with an ink jet head” is not limited to the specific method step, but only to the structure implied by the step. For example, the structure includes in this order: an IC, a barrier, and an ink receiving layer, which the prior art provides. See MPEP 2113. Applicant’s product and the prior art are the same.

The new limitations provide for a barrier comprised of epoxy (new claim 22) and where the barrier contains a concentration of ionic chlorine of 100 ppm or less (amended claims 14 and 18). To the concentration of ionic chlorine of 100 ppm or less, this range includes zero, which means the chloride ion is not present, which the combination of Hida and Nakajima already teach. Further, Sei teaches an adhesive for semiconductors. Sei provides it is known that conventional adhesives for semiconductors comprise polyamide resin and epoxy resin containing residual chloride ions as impurities but curing makes it possible to remove the chloride ions in order to improve the electrical insulation reliability, heat and chemical resistance. See col. 1, lines 18-45. See also col. 2, lines 44-51 where Sei provides an adhesive layer between polymer films having flexibility (plastic). Sei, Nakajima, and Hida are analogous art because they involve the same technical field, namely the circuitry art. It would have been obvious to one of ordinary skill in the art to include epoxy resin as a curing agent in the barrier layer of the combination of Hida and Nakajima because Sei provides the teaching when the epoxy adhesive is cured, improvements in the electrical insulation reliability, heat and chemical resistance are provided. See col. 1, lines 1-18-45 and col. 2, lines 44-51. These are the same reasons Applicant employs epoxy. Further to the concentration of ionic chloride of 100 ppm or less, the concentration is an optimizable feature as Sei provides the concentration directly effects

Art Unit: 1774

electrical insulation reliability. It would have been obvious to one of ordinary skill in the art to produce a concentration of ionic chloride of 100 ppm or less, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding the air permeability property of claim 15 and 19, Nakajima is silent to teaching a barrier layer having an air permeability property being measured by Gurley test method. However, such property is optimizable as it depends upon the fibrous spacing of the filaments in a nonwoven sheet, thereby effecting the porosity of the nonwoven. Hence it would have been obvious to one of ordinary skill in the art to modify the recording material of Nakajima to include a layer having air permeability properties since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Air permeability effects the porosity.

Regarding new claim 20, that ink-jet recording can be carried out/is able to be is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Regarding claim 21, that the recording medium is used as a non-contact tag, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

### ***Response to Arguments***

The invention of Nakajima is still used to teach the structure in this order: a support, an adhesive (equivalent barrier/base material functionality), image-receiving layer with an ink sheet/layer over to form the image (ink receiving). The IC memory is on the support. See col. 1, lines 35-45, col. 6, lines 1-23, col. 7, lines 1-15, col. 10, lines 15-60. Hida is still used to teach the inclusion of a barrier between the IC and support. Sei is now provided to teach a barrier of epoxy and removing chloride ion. In regards to the argument that Nakajima does not teach a base on an IC, the base on an IC is provided by Hida in the rejection as now written. In response to Applicant's arguments that Nakajima's ink receiving layer is not thick enough to prevent ink from reaching the IC, as set forth above, the entire card of Nakajima employs various layers (e.g. a cushion, barrier, adhesive and support) all between the ink and IC and the same barrier thickness range is also taught, therefore ink would not reach the IC part, just as Applicant desires.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

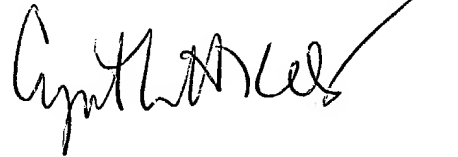
Art Unit: 1774

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 30, 2004

[tld]

CYNTHIA H. KELLY  
SUPERGRADY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

A handwritten signature in black ink, appearing to read 'Cynthia H. Kelly', with a long, sweeping horizontal line extending to the right.